

**REMARKS**

This reply encompasses a bona fide attempt to overcome the rejections raised by the Examiner and presents amendments as well as reasons why the applicants believes that the claimed invention is novel and unobvious over the closest prior art of record, thereby placing  
5 the present application in a condition for allowance.

*Regarding Claim Status*

Claims 1-12 were presented for examination. Claims 1-12 were rejected. Claims 1-12 are amended herein. Claims 13-16 are newly added. No claim is canceled. No new matter is  
10 introduced. Support for the amendments presented herein can be found in the Specification as originally filed, particularly on page 2, *para.* 3, pages 8-10, and FIGS. 5-8. By this Amendment, claims 1-16 are pending.

*Regarding Rejections*

15 Claims 1-10 and 12 were rejected under 35 U.S.C. § 102(e) as being anticipated by Auger et al. (U.S. Patent No. 6,094,425, hereinafter referred to as “Auger”). Dependent claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Auger. The rejections are respectfully traversed. Not only Auger as a whole is distinguished from the claimed invention, Auger specifically teaches away therefrom, effectively rendering the present  
20 invention *prima facie unobvious* over Auger. Here’s why.

Both Auger and the present application are directed to resource allocation in a network environment. Both recognize the disadvantages of existing radio communication systems. However, each provides a unique and different solution.

- 5 Auger proposes a decentralized technique of resource allocation. In Auger, access control is implemented per station. In other words, Auger's solution decentralizes the management of transceiver stations (mobile devices), which traditionally is handled by centralized management devices and/or one or more base stations [col. 1, lines 15-24].
- 10 More specifically, according to Auger, transceiver stations together form a decentralized radio system in which data transmissions between these stations are assembled in groups in frames in a time/frequency space [col. 1, lines 57-63]. Each station listens on a monitoring frequency to search for free slots to determine the parameters of occupancy or busy level of a future transmission [col. 1, line 63, through col. 2, line 9]. Each station indicates the 15 occupancy state or busy state of the time/frequency space as it appears to them [col. 3, lines 34-55]. Each station defines a table of occupancy and, on the basis of this table, makes a choice of one or more free slots [*id.* lines 56-60]. Each station has a processing device that prepare a table of occupancy for the slots [col. 4, lines 29-61].
- 20 According to Auger, there is NOT an intelligent radio port controller that centrally manages a shared medium in a multi-tier wireless ATM network. Indeed, Auger specifically teaches that the decentralized system enables direct transmission between stations without any control station or centralized management [col. 1, lines 46-51, col. 2, lines 15-18].

- Contrastingly, the present invention provides a centralized port controller that implements a reservation-based media access control and resource allocation method for a multi-tier wireless ATM network [Spec. page 2, Summary]. The intelligence of the network is in the 5 implementation of the radio port controllers and the switching hardware [Spec. page 6, *para.* 3.] Each radio port controller (think of it as a “resource broker”, *id.*) manages resource allocation of a shared media and allows for ongoing reservations to be made, i.e., queuing access requests from radio ports (mobile units).
- 10 This means that a wireless device requesting access to a shared media can reserve the resource over a long period of time without having to repeat the request. This advantageously allows for better quality-of-service (QoS) as well as battery savings, since the wireless device no longer has to repeat the same request over and over again.
- 15 Another advantage is that with a centralized controller the wireless device does not need to monitor and detect who is transmitting and where, etc. As a whole, a centralized controller eliminates the complexity requirements on the mobile units/devices. This is important and beneficial both in implementation and power savings. Other centralized systems mentioned in Auger as well as in the present application are unable to implement such a port controller 20 in practice [Spec. page 6, *para.* 1; pages 11-16].

Yet another important, distinguishing difference is that the claimed invention allows arbitrary number of slots and of different priorities (first in class, then in order within a class) to be

requested [see, e.g., FIGS. 5-8, searching for an exact match by checking the CCM, Spec. page 9, para. 1]. This is particularly useful in a multi-tier wireless ATM network and in contrast with Auger where transmissions are assembled in groups that are optimally organized corresponding to an orthogonal pavement block pattern [col. 1, lines 57-63; col. 3, 5 lines 24-28; Fig. 2].

Auger does mention ATM cells in regards to the “**compatibility**” with an ATM network [col. 4, lines 17-28]. However, Auger’s decentralized radio system requires an allocation of n slots at a time [*id.* at line 25, packets may correspond to a subdivision into ATM cells]. This 10 makes the allocation process easier, but introduces a buffering delay on the mobile stations.

Claim 1 is amended herein to further distinguish from Auger and is respectfully submitted to be patentable over Auger in view of the foregoing arguments. Moreover, at the time of the present invention, one skilled in the art did not possess the knowledge disclosed in the 15 present application with respect to optimizing the centralized management of resource allocation. Specific advantages and comparison with prior art systems are described in the present application on pages 11-16.

As to claim 2, Auger does not teach a CCM as defined in the present application.

20 **Patent Examiners must rely on the applicant's disclosure to properly determine the meaning of terms used in the claims.** *Markman v. Westview Instruments*, 52 F.3d 967, 980, 34 USPQ2d 1321, 1330 (Fed. Cir.) (en banc), aff'd, U.S., 116 S. Ct. 1384 (1996) (emphasis added).

25 An applicant is entitled to be his or her own lexicographer, and in many instances will provide an explicit definition for certain terms used in the claims. **Where an explicit definition is provided by the applicant for a**

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term, that definition will control interpretation of the term as it is used in the claim. Toro Co. v. White Consolidated Industries Inc., 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (emphasis added) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings.").

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As to claims 3-12, Auger does not teach a reservation-based port controller configured to perform those recited steps. In addition, it would not have been obvious to one ordinary skill in the art at the time of the invention, upon reading Auger, to modify Auger and somehow arrive at the invention as set forth in the claims because Auger specifically teaches away from the centralized management of resource allocation.

### *Conclusion*

The amendments presented herein encompass a bona fide attempt to accelerate prosecution and forward the present application to allowance without changing the direction of the claims, without affecting the merit of the claims, without raising new issues, and without introducing new matters. In particular, the independent claim 1 as amended explicitly recites a "port controller" configured to implement a "reservation-based" resource allocation method for a "multi-tier" wireless ATM network, as disclosed in the specification to overcome the closest prior art of record under 35 USC §§ 102(e) and/or 103(a).  
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For the foregoing reasons, it is respectfully submitted that the invention as set forth in the independent claim 1 is patentable over Auger. Dependent claims 2-16 are submitted to be patentable as established in *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

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Since the Examiner has done a thorough search in the first Office action in light of the entire application disclosure and claims, no new search should be necessary. Favorable consideration and a Notice of Allowance of all pending claims are therefore earnestly solicited.

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The Examiner is sincerely invited to telephone the undersigned to discuss an Examiner's amendment or any suggested actions necessary to forward the present application to allowance. The undersigned can be reached directly at 650-331-8413, 10AM-7PM PST, Monday-Friday.

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Respectfully submitted,



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